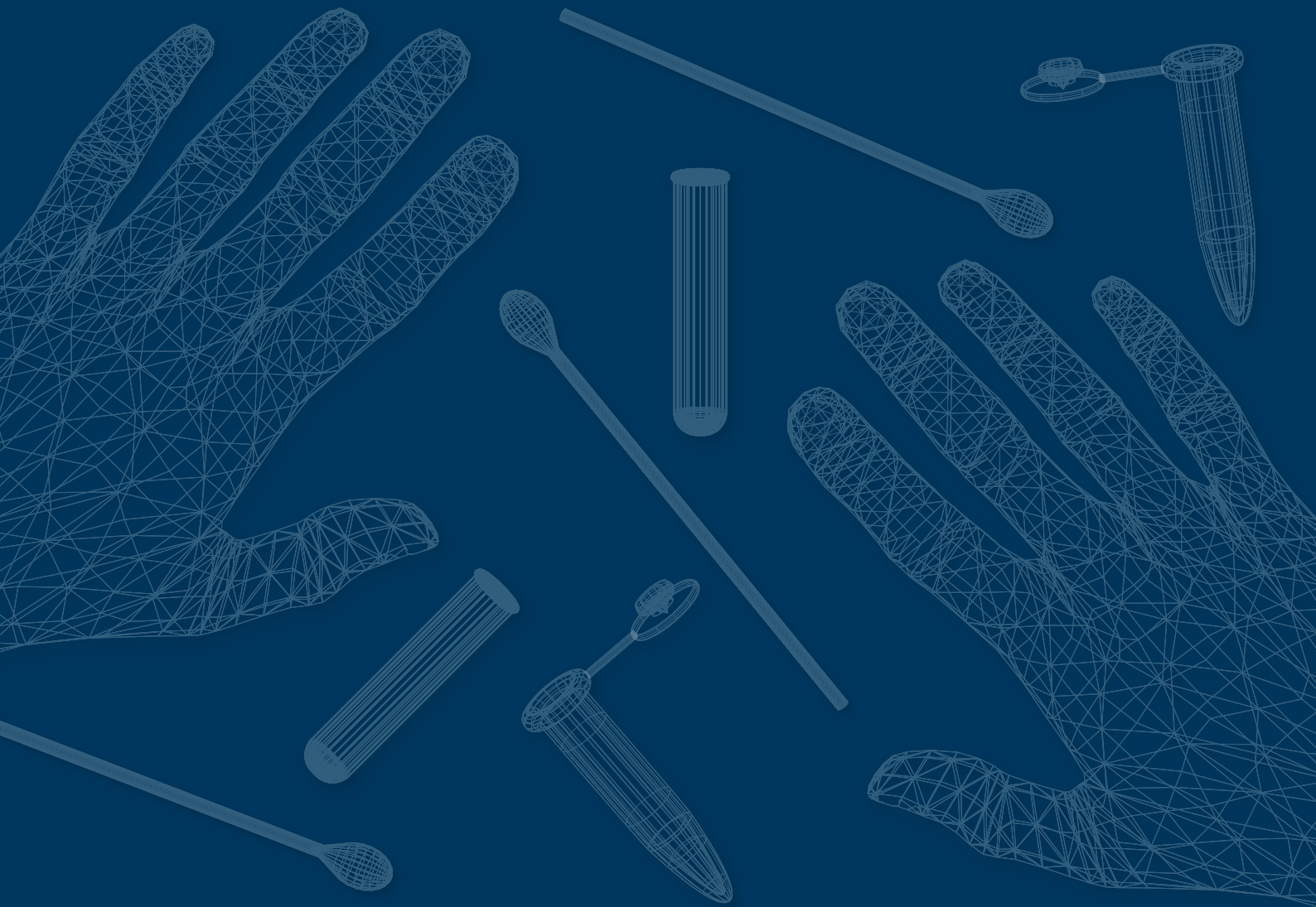


PAS 377:2023

Consumables used in the collection, preservation and processing of material for forensic analysis – Product, manufacturing and forensic kit assembly – Specification



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Foreword

This PAS was commissioned by the Forensic Science Regulator and sponsored by the Home Office. Its development was facilitated by BSI Standards Limited and it was published under licence from The British Standards Institution. It came into effect on 31 January 2023.

Acknowledgement is given to June Guinness OBE BSc (Hons) DMS as the technical author, and the following organizations that were involved in the development of this PAS as members of the steering group:

- Association of Forensic Science Providers
- Bedfordshire, Cambridgeshire and Hertfordshire Police Scientific Services Unit
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Acknowledgement is also given to the members of a wider review panel who were consulted in the development of this PAS.

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Supersession

This PAS supersedes PAS 377:2012, which is withdrawn.

Relationship with other publications

Forensic kits and consumables that conform to this PAS are intended for use by end users in conjunction with the Forensic Science Regulator Code of Practice [1].

Information about this document

This is a full revision of the PAS, and introduces the following principal changes:

- a) new dedicated sections for risk assessment and kit assembly have been added;
- b) product release replaces and expands the previous clause titled 'provision of information to the end user';
- c) The quality management section is in the new informative Annex A; and
- d) Annex B has been replaced with requirement to comply with BS ISO 18385 and the drug/metabolite concentration table listed has been updated to produce an informative annex.

Assessed capability. Users of this PAS are advised to consider the desirability of quality system assessment and registration against the appropriate standard in the BS EN ISO 9000 series by an accredited third-party certification body.

Test laboratory accreditation. Users of this PAS are advised to consider the desirability of selecting test laboratories that are accredited to BS EN ISO/IEC 17025 by a national or international accreditation body.

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Presentational conventions

The provisions of this PAS are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is “shall”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Where words have alternative spellings, the preferred spelling of the *Shorter Oxford English Dictionary* is used (e.g. “organization” rather than “organisation”).

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Introduction

Forensic science is the application of science pertaining to the law. This includes the investigation and prosecution of crime by the police and other agencies, and assisting the courts in determining guilt or innocence of those accused of having committed a crime.

In general terms, the forensic science process includes the following steps:

- a) location and recovery of material of potential forensic interest;
- b) preservation and transportation of material of potential forensic interest; and
- c) analysis of material and interpretation of the results.

Depending on the forensic science process being undertaken, the analysis and interpretation includes comparison against controls or reference samples.

These steps typically utilize forensic kits and other consumables, depending on the type of evidence being recovered and analyzed. This includes:

- 1) swabs, gauze, forceps, combs, paper sheets, blades, gels and tapes used for recovery;
- 2) vessels to physically contain material during transport; and
- 3) glass vials, plastic tubes and analytical reagents used in laboratory analytical processes.

It is crucial that consumables and forensic kits do not compromise the integrity of the samples collected or adversely affect the analytical process in any way. To do so could potentially diminish the value and reliability of the forensic evidence. This, in turn, would increase the risk of an investigation being misled, poor judicial outcomes being made in the courts or could even result in a miscarriage of justice.

Examples of compromised consumables that have occurred within the UK include:

- i) hair on disposable scene suits;
- ii) fibres in DNA swab tubes;
- iii) propellant contamination of gunshot discharge residue kits from a nail/propellant gun used for building repairs at a kit assembler's facility;
- iv) chemical constituents leaching out of the rubber septum used on vials to analyse for alcohol/drugs; and
- v) leaching of constituents of nylon bags released when heated, interfering with ignitable liquid analysis.

The aim of this PAS is to provide a high-level specification that can be adopted by manufacturers of consumables and assemblers of forensic kits to minimize the risk of compromising the integrity of samples, such as through inadvertent contamination, or adversely affecting the analytical process by the nature of the consumables and reagents used.

Evidence of compliance with this PAS can assist end users of consumables and forensic kits with their procurement decisions, and provide assurance to other stakeholders in the criminal justice system by promoting confidence in the forensic science process.

NOTE *This PAS is intended to assist assemblers in producing forensic kits that meet the requirements of the Faculty of Forensic and Legal Medicine's document," [2].*

This PAS is intended to provide an overarching framework for all consumables used for the collection, sampling, packaging, transport, storage and analytical testing of material recovered, so that consumables are suitable for intended use; this is a requirement set within the Forensic Science Regulators Code of Practice [1], therefore using consumables in compliance with this PAS should meet that requirement.

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1 Scope

This PAS specifies requirements for:

- a) consumables used in the collection, preservation and processing of material for forensic analysis;
- b) the manufacture and storage of these consumables; and
- c) the assembly and packaging of forensic kits.

The PAS covers:

- 1) risk assessment;
- 2) product requirements;
- 3) traceability, continuity and integrity;
- 4) consumable manufacture and kit assembly;
- 5) personnel;
- 6) product release; and
- 7) quality management.

This PAS does not cover technical product specifications for consumables, although it could be used by manufacturers to assist in developing a technical product specification.

This PAS is intended for use by manufacturers and assemblers of consumables and kits, and is of interest to end-user organizations, such as police forces, forensic science laboratories, and sexual assault referral centres.

This PAS might also be of interest to anyone buying, selling, using or relying on the performance of consumables to conduct sampling, and to those who preserve, transport or analyse consumables within the forensic examination workflow.

This PAS is intended to apply to all consumables and forensic kits, regardless of where they are produced, and includes those that are assembled by end users themselves, such as police forces or forensic laboratories.

This PAS is intended to be internationally applicable.